

S.N. 09/689,574

REMARKS

Claims 11-20, 48-57 and 77-78 are rejected under 35 U.S.C. § 103(a) as unpatentable over *Hubans* (U.S. 5,233,304) in view of *Segesman* (U.S. 4,360,777). Applicants have amended the claims to further clarify and distinguish the invention.

The patent law makes clear that to establish prima facie obviousness the references must teach or suggest all the claim limitations and there must be some suggestion or motivation in the prior art to modify the reference or to combine reference teachings. MPEP 2143 (citing *in re Royka* 490 F.2d 981 (CCPA 1974)).

Neither *Hubans* nor *Segesman* (alone or in combination) teach or suggest all the limitations of the invention set forth in the amended claims. Even if they did teach or suggest all the claimed limitations, these references are lacking any objective reason or motivation to combine their teachings.

Hubans describes well casing equipped with conventional source coils having coaxial axes that transmit in a general distribution. Expressly missing from *Hubans* is any mention of or discussion related to antennas with tilted axes to provide targeted measurements. *Hubans* is also missing any teaching or suggestion related to the use of antennas disposed near openings in tubulars. *Segesman* describes a logging tool equipped with an array of transmitter and receiver coils having mutually orthogonal axes along rectangular x, y, z coordinates. This antenna structure is very limited and arguably teaches away from the claimed invention. *Segesman* is also missing any disclosure related to the use of antennas disposed near openings in tubulars adapted for permanent subsurface disposal.

In conclusion, the cited references fail to teach or suggest all the limitations of the amended claims and, even if they did, no objective reason or motivation is found to combine their teachings. Applicants respectfully submit that amended claims 11-20, 48-57, and added claims 79-87 are in condition for allowance and the rejections should be withdrawn. No new matter has been added by amendment. If the Examiner believes that a telephone conference would be advantageous in advancing the issuance of the present application, a call to the undersigned at (281) 285-4562 is strongly encouraged.

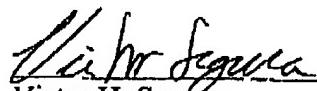
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Respectfully submitted,


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